

AMENDMENTS TO THE CLAIMS:

Please amend claims 7 and 11 as follows and cancel claims 1, 6, 8 and 13-16. This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (Cancelled)

2. (Currently Amended) The method as claimed in claim 4 7 wherein the preselected movable real object comprises a reference panel such as a screen, tablet or piece of paper and the identifying includes recognizing a corner of the panel.

3. (Original) The method as claimed in claim 2 wherein the determining comprises calculating distances between corners and a center point of the reference panel.

4. (Original) The method as claimed in claim 3 wherein the computing comprises converting the calculated distances to the dimensional identity and location based on an assumption that the reference panel is structurally flat.

5. (Currently Amended) The method as defined in claim 4 7 wherein the verifying includes testing from at least one of the tests of (a) whether the movable real object has expected dimensions or proportions, (b) whether the corners are right angles, (c) whether a center point matches when calculated from distinct sets of the corners, (d) whether the corners are generally within a common plane, and (e) whether the movable real object lies within an expected viewing range.

6. (Cancelled)

7. (Currently amended) A method of verifying a projected image within a three-dimensional view plane of an augmented-reality display system as a

preselected movable real object comprised of three equidistant line points disposed in three-dimensional free space, whereby the object may be employed as an interface tool for the system, comprising steps of:

identifying a representative characteristic of the movable real object within the three-dimensional view plane wherein the representative characteristic comprises shape and location of the object and is exclusive of preselected marked standards and printed identifiers;

determining dimensional aspects of the movable real object from the projected image including the detection of projected dimensions of the three equidistant line points;

computing a corresponding dimensional identity and location of the movable real object at an object point relative to the view plane including calculating X, Y and Z coordinates in real space of the movable real object at the object point based on the projected dimensions of the three equidistant line points in the view plane and known augmented-reality display system geometric dimensions; and,

verifying whether the dimensional identity and location are reasonably consistent with predetermined standards for the object.

8. (Cancelled)

9. (Currently Amended) The method as defined in claim 8 11 wherein the calculating includes identifying a diagonal between the corners comprised of three equidistant line points.

10. (Original) The method as defined in claim 9 wherein the identifying includes identifying a center point of the diagonal.

11. (Currently amended) A method for identifying a movable real piece of paper disposed in free space in a variable three-dimensional viewing area of an augmented-reality display system comprising steps of:

identifying an object at a viewing plane in the three-dimensional viewing area having a characteristic representative of the piece of paper wherein the characteristic is exclusive of preselected registration marks and printed identifiers;

locating a plurality of corners of the object;

calculating a dimensional representation of the object in the viewing plane from the locations of the corners;

unprojecting the dimensional representation to calculate a plurality of object coordinates representative of a size of the object and a distance of the object from the viewing plane including calculating X, Y and Z coordinates in real space of the object based on dimensions of the movable real object in the viewing plane and display system geometrics; and,

comparing the object coordinates with predetermined standards indicative of the piece of paper for verifying the object as the piece of paper.

12. (Currently Amended) The method as defined in claim 8 11 wherein the comparing includes testing from at least one of the tests of (a) whether the object has expected dimensions or proportions, (b) whether the corners are right angles, (c) whether a center point matches when calculated from distinct sets of the corners, (d) whether the corners are generally within a common plane, and (e) whether the object lies within an expected viewing range.

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Currently amended) The method as defined in claim 8 11 wherein the unprojecting comprises unprojecting a plurality of dimensional representations of the object attributable to three-dimensional movement of the object in the variable viewing area.